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 GB 1046627

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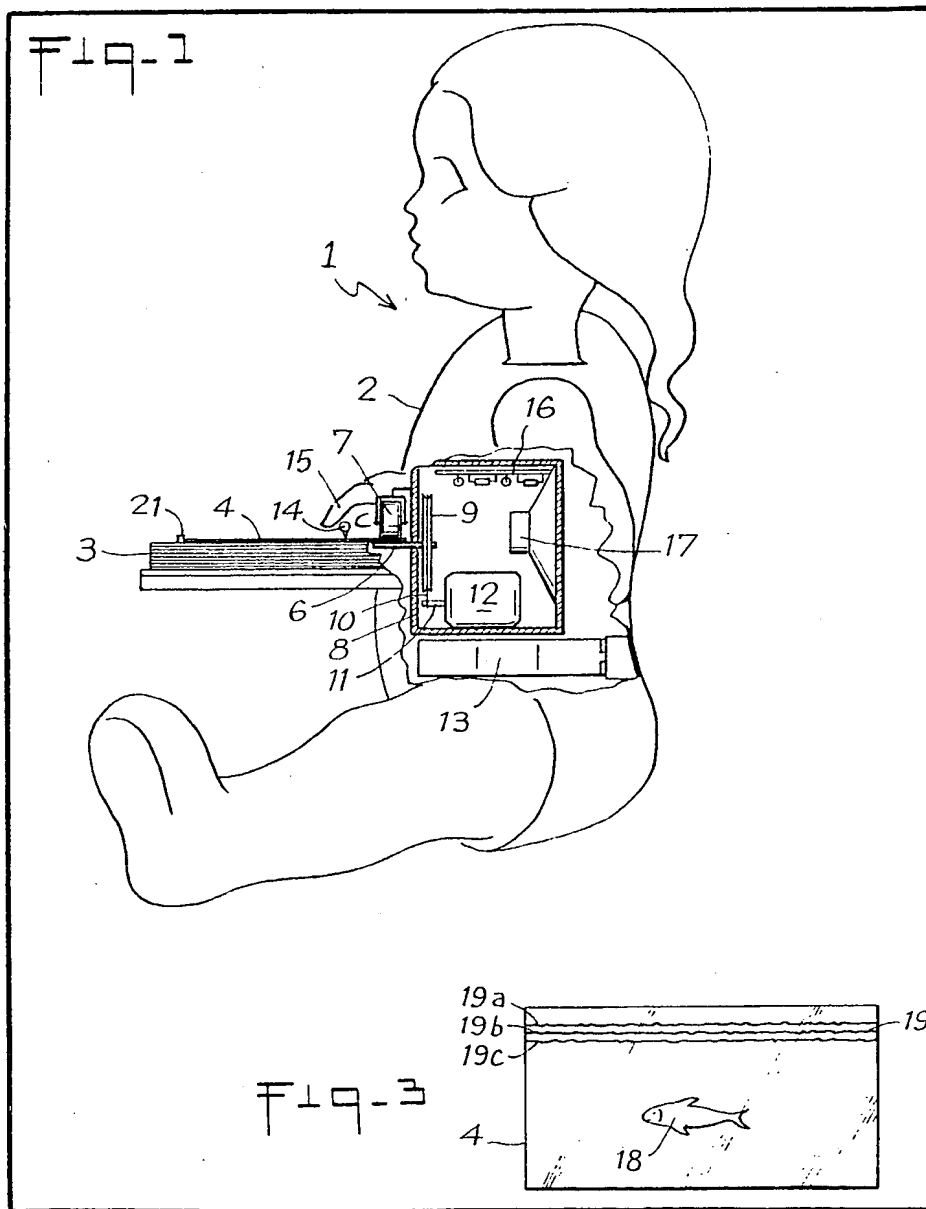
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(54) **Speaking doll for the education  
 of children**

(57) An educational device comprising  
 a doll (1) and a set of reading cards,  
 each card (4) containing a graphic  
 representation and a sound recording  
 associated with the graphic

representation. The doll (1) includes a  
 card reading station (3) which enables  
 a card (4) to be received and to be  
 passed in front of a reading head (14)  
 which is concealed and is connected  
 to a unit (16, 17) for the reading and  
 broadcasting of the sound recording  
 (19), this unit (16, 17) being placed  
 inside the body (2) of the doll (1).



The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

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FIG-1

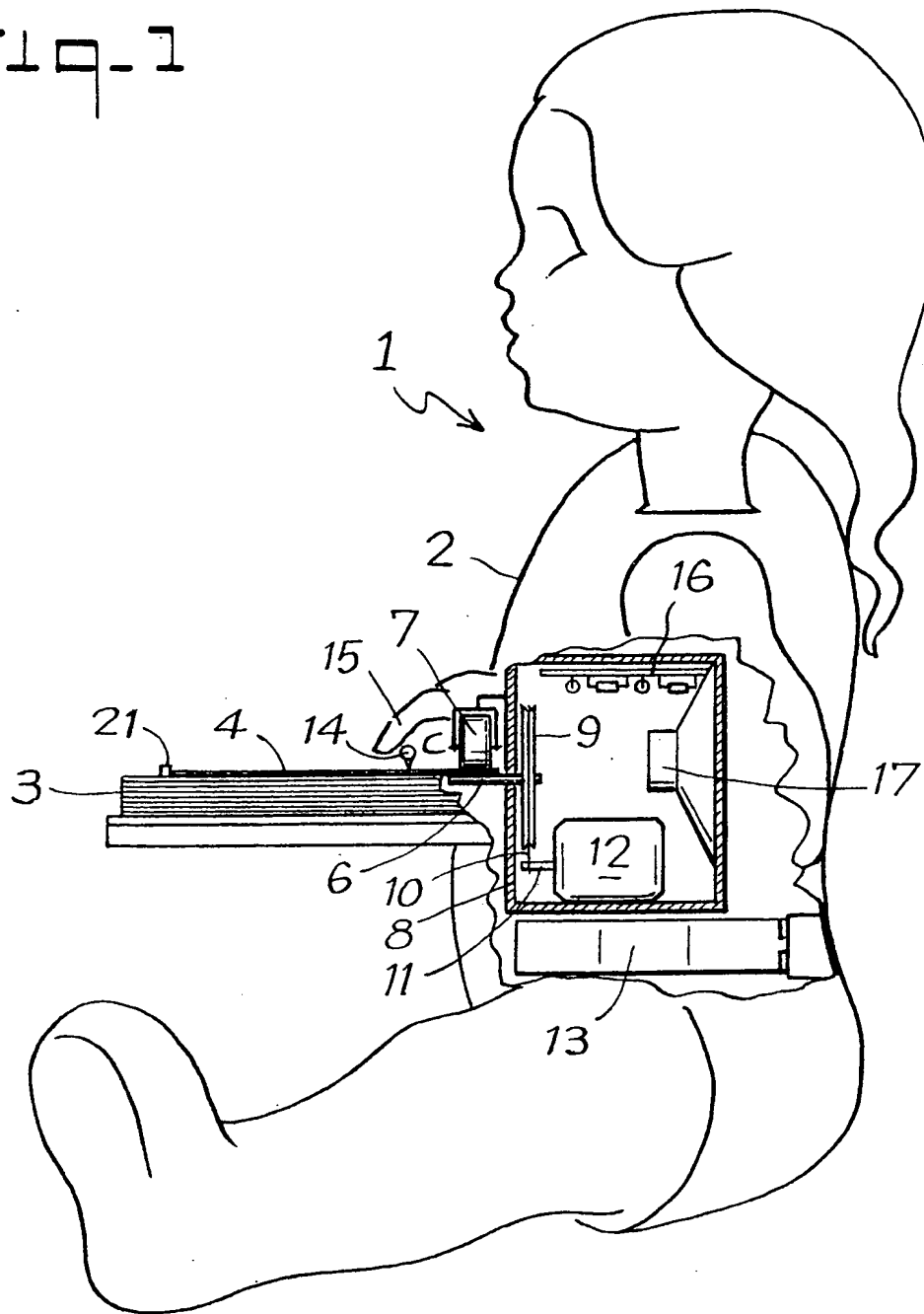


Fig-2

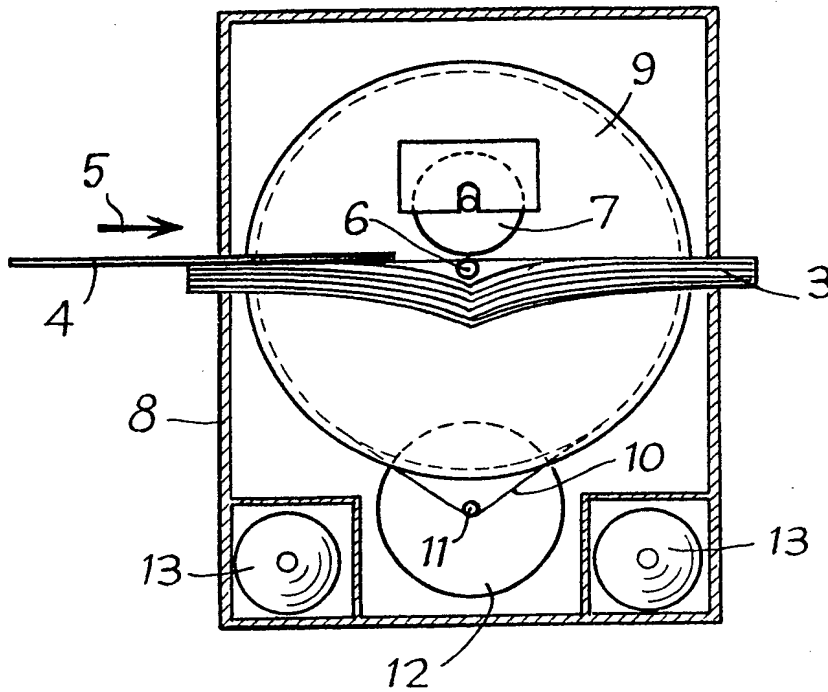


Fig-3

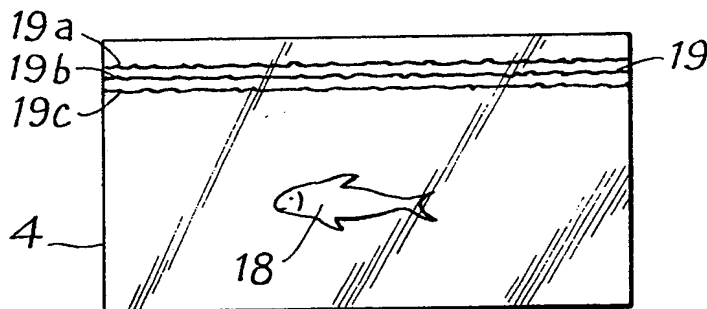
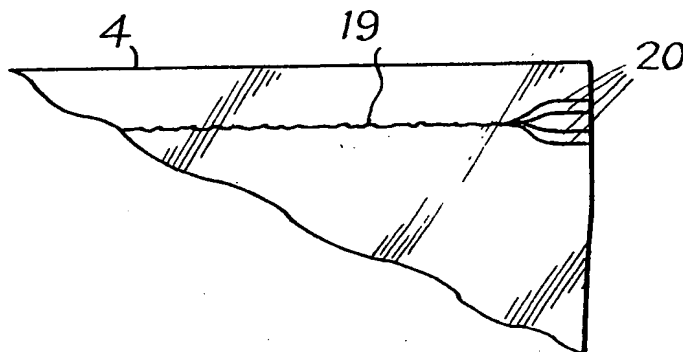


Fig-4



## SPECIFICATION

**Speaking doll for the education of children**

This invention relates to an educational device comprising a doll intended for teaching children by means of play.

Early education of children is becoming increasingly important in a more and more sophisticated world.

Toys are ideal intermediaries in education since, by means of playing, they enable basic notions to be instilled into children.

Talking dolls are known but, until now, had only a very restricted vocabulary which could not be varied beyond a limited number of pre-established recordings, usually on discs, which were introduced into the doll. The design of such systems is too rudimentary to enable any educational objective, which is in any way complex and evolutionary, to be achieved.

Furthermore, the child's interest may be caught by the audible message but this single source quickly proves to be insufficient to enable the child to assimilate properly any information other than that which is purely of an audible nature, thus limiting considerably the scope of the system.

An object of the present invention is to produce an educational unit with more varied possibilities which, in particular, enables a child to acquire more complex intellectual notions and mechanisms on the basis of a two-fold visual and audible perception. It is known that the way in which humans perceive the outside world rests basically on the use of these two senses; in other words, the field of application covered by the invention is enormous. More specifically, the purpose of the invention is to produce a doll, the units of which enable the child to believe that the doll is clever and, for example to believe that it is able to read, to count, that it is acquainted with sol-fa, or that it recognises colours or animals.

According to the present invention, there is provided an educational device comprising a doll intended for teaching children by means of play, a set of reading cards each card including, on the one hand a graphic representation and, on the other hand, a sound recording associated with the graphic representation; a card reading station which enables a reading card to be received and to be passed in front of a reading head at said reading station, and a unit connected to the reading head for the reading and broadcasting of the sound recording on said card this unit being located within the body of the doll.

Preferably, the card reading station is located outside the body of the doll.

According to one form of embodiment, each reading card includes at least one sound recording groove formed in plastics material, the reading head of the reading station being a pick-up head for such a groove. The pick-up head enables the recorded tape to be read. Following the modulations in the groove, the electric signal is amplified and then applied to the terminals of a

loud speaker.

Such devices may be manufactured by the makers of toy record players.

It should be noted that it is possible to produce a stronger and cheaper version of the means of broadcasting by providing a deep recording groove on a rigid plastics sheet which enables the electronic amplification circuit and the electrodynamic loud speaker to be dispensed with. This version is intended mainly for small children on account of its strong nature and since its principle allows only the recording of a short text.

According to another embodiment, each reading card includes at least one magnetic sound recording, with the reading head of the reading station being a magnetic head.

Preferably, each reading card includes at least one linear sound recording, and the reading station includes a flat support associated with means for the linear drive of the cards across the latter.

According to a further feature, there is provided an electric motor inside the body of the doll, which drives a speed reducing flywheel, a shaft of which projects outside the body of the doll, is situated more or less flush with a flat reading support at the reading station, and cooperates with a pressure roller to grip and drive a card through said station.

Preferably, the card reading station takes the form of a book or a desk placed in front of the body of the doll, and the reading head is concealed in one of the doll's hands which is placed above the reading station.

In this way, a device is obtained which meets very precise objectives; on the one hand, children are attracted to the doll on account of its emotional and amusing aspects while, on the other hand, it aims via its technique to introduce the elements of education which enable the child to be stimulated to the initial bases of education.

It has been found particularly that girls identify with their dolls. If the doll can read and count, the child automatically wishes to do the same.

Consequently, all that is necessary is progressively to introduce texts which have been well chosen and illustrated so as to leave an impression on the child's memory. The doll is a little teacher, a model to be imitated. This educational device also serves as an aid for parents who wish to devote themselves to the tedious task of teaching their children to read or, in general, for those who wish to interest themselves in the education of their children.

It is important to note that, in order for the device to achieve its educational objectives fully—in other words in order to enable a real identification of the child with its doll—nothing should apparently distinguish this doll from other dolls. The mechanism is concealed inside a flexible body and there is no visible machinery to destroy the illusion. This doll is of traditional appearance and only a book, for example, resting on its knees, introduces a personal note. The book

acts as a support for the passage of the recorded cards, thereby giving the illusion that the doll is sorting through texts, figures or other graphic representations shown on the card. This illusion can be strengthened if the doll points with one hand (the one containing the reading head) to the drawing which is the subject of the reading.

Other advantages and characteristics of the invention will be further understood from the following description, given by way of example only, of a preferred form of the invention, with reference to the attached drawings in which:—

Fig. 1 represents a diagrammatic side view of a doll made in accordance with the invention, with part removed to show the doll's internal mechanism;

Fig. 2 represents a diagrammatic partial front view showing the units for supporting and moving a card;

Fig. 3 represents a recorded card; and Fig. 4 represents a detail of cutting of a recorded card.

Fig. 1 shows a preferred form of embodiment of the doll 1. The doll is in a seated position and includes, at the front of the body 2, a card reading station 3 which takes the form of an open book, the upper surface of which is flat and acts as a support for a reading card 4.

The reading card 4 which is introduced laterally (arrow 5, Fig. 2) onto the support 3 is moved in a linear direction when it is captured by a drive shaft 6 and a pressure roller 7 which rests under its own weight on the shaft 6.

The shaft 6, which is buried partly in the book 3 and more or less flush with the upper flat surface of the support, passes through a casing 8 of an internal reading and sound producing mechanism which is hidden inside the body of the doll.

The internal end of the shaft 6 supports a grooved flywheel 9 which is driven by means of a belt 10 by the shaft 11 of a small electric motor 12 which is fed, via connections which are not shown, by batteries 13 which may be outside the casing 8 as in Fig. 1, or housed within the casing as in Fig. 2. An access point is provided at the back of the doll for the purpose of changing the batteries.

The reading of a sound recording which is made on a card 4 is done by means of a reading head or pick-up head 14 which, preferably is concealed under the hand 15 of the doll, which is placed above the support and which appears to be pointing out the graphic representation associated with the sound recording which is being read. The reading head 14 is connected, by means of suitable connections and through an integrated circuit 16 arranged in the case 8, to a loud speaker 17 which is also housed in the case 8. Naturally, the invention is not at all to be found in the production circuits which are well known in the electronics field. For example, use may be made of the circuit which is sold under reference TBA 8 20 T by Texas Instruments. The unit is powered by the batteries 13.

The casing 8 is very compact (for example, a parallelepipedic case 62×62×77 mm has been produced) and it is inserted easily into the foam body of the doll.

Once the doll is dressed, it appears to be holding a book or a desk in front of it on its knees. No external mechanism is to be seen since the reading head can be hidden underneath a hand while the drive mechanism which is likewise very close to the body is also practically hidden by the arm and the doll's clothes.

The reading cards 4 may be plasticised rectangular cards. On the one hand, they contain a graphic representation 18 which may be a drawing, a word, a sentence, a note of music, a colour etc., and, on the other hand, a sound recording 19 (generally a text), corresponding, in one way or another, to the graphic representation in a given educational drawing. The child passes a card 4 into the reading station 3 and associates the sound recording with the graphic representation particularly well since the latter remains visible as it is moving and the hand 15 of the doll even appears to draw the child's attention to the graphic representation.

The recording 19 may be done in the form of a magnetic tape fixed to the card 4 but, for reasons of cost and durability, a recording which is made as a groove directly onto the card or onto a PVC plastic tape stuck onto the card 4 may be preferred.

A groove recording reader is then produced by means of a piezo-electric pick-up head 14, the output level of which is sufficiently high to be able to drown the interference from the motor (which is particularly troublesome with a magnetic reading head). The advantage of recordings of this type on a flexible plastic tape which is pasted onto the image card is that they are permanent and durable. This is important since the cards are handled by children. Moreover, it will be much easier to obtain duplicates.

Naturally, for reasons of simplicity, but above all, in order to enable a good sound/image association to be made, the recording and reading system is linear, thereby ensuring easy correspondence between the graphic representation and the audible reading thereof.

As shown in Fig. 3, it is possible to arrange to juxtapose several recording tracks (19a, 19b, 19c) on the tape or card. These tracks may present the same recording so that, in the most rudimentary systems where alignment of the card 4 at the reading station could be imperfect, the pick-up head can operate on any one of the tracks.

For systems of this kind, it is also possible to provide a single track which includes, at the introductory and auxiliary guiding tracks 20 which enable the reading head to be introduced into the track 19 quickly.

However, since correct alignment of the reading card at the reading station is not difficult (for example, a stop 21 on the reading support 3 can be provided if the format of the cards is

standardised) it is possible to juxtapose several rectilinear tracks in order to provide different recordings which can be selected by altering the position of the reading head 14 by means of a suitable selector mechanism. As an example, neighbouring tracks may record the same text in relation to the graphic representation but spoken in several languages. The interest and multiplicity of such applications may easily be imagined.

The cards are able to handle the most diverse subjects; reading, colour study, mathematics, languages, music and, in general, all ways in which the audio-visual connection enhances learning and amusement.

The cards can contain a long or short sound recording per unit of length depending on the recording method chosen. The use of a relatively flexible plastic on a macroscopic scale makes it possible to manufacture cards of great lengths which can be rolled up for storage. It is also possible to envisage joining several rigid cards to one another by means of flexible hinges which would enable the set of cards to be folded up like a concertina.

## 25 Claims

1. An educational device comprising a doll intended for teaching children by means of play, a set of reading cards, each card including, on the one hand, a graphic representation and, on the other hand, a sound recording associated with the graphic representation; a card reading station which enables a reading card to be received and to be passed in front of a reading head at said reading station and a unit connected to the reading head for the reading and broadcasting of the sound recording on said card, this unit being located within the body of the doll.

2. An educational device according to Claim 1, characterised by the card reading station being located outside the body of the doll.

3. An educational device according to Claim 1 or Claim 2, characterised by each reading card including at least one sound recording groove, the reading head of the reading station being a pick-up head for such a groove.

4. An educational device according to Claim 1 or Claim 2, characterised by each reading card including at least one magnetic sound recording, the reading head of the reading station being a magnetic head.

5. An educational device according to any one of Claims 1 to 4, characterised by each reading card including at least one linear sound recording and by the reading station including a flat support associated with means for the linear drive of cards across the latter.

6. An educational device according to Claims 3 and 5, characterised by each card including several parallel recording grooves.

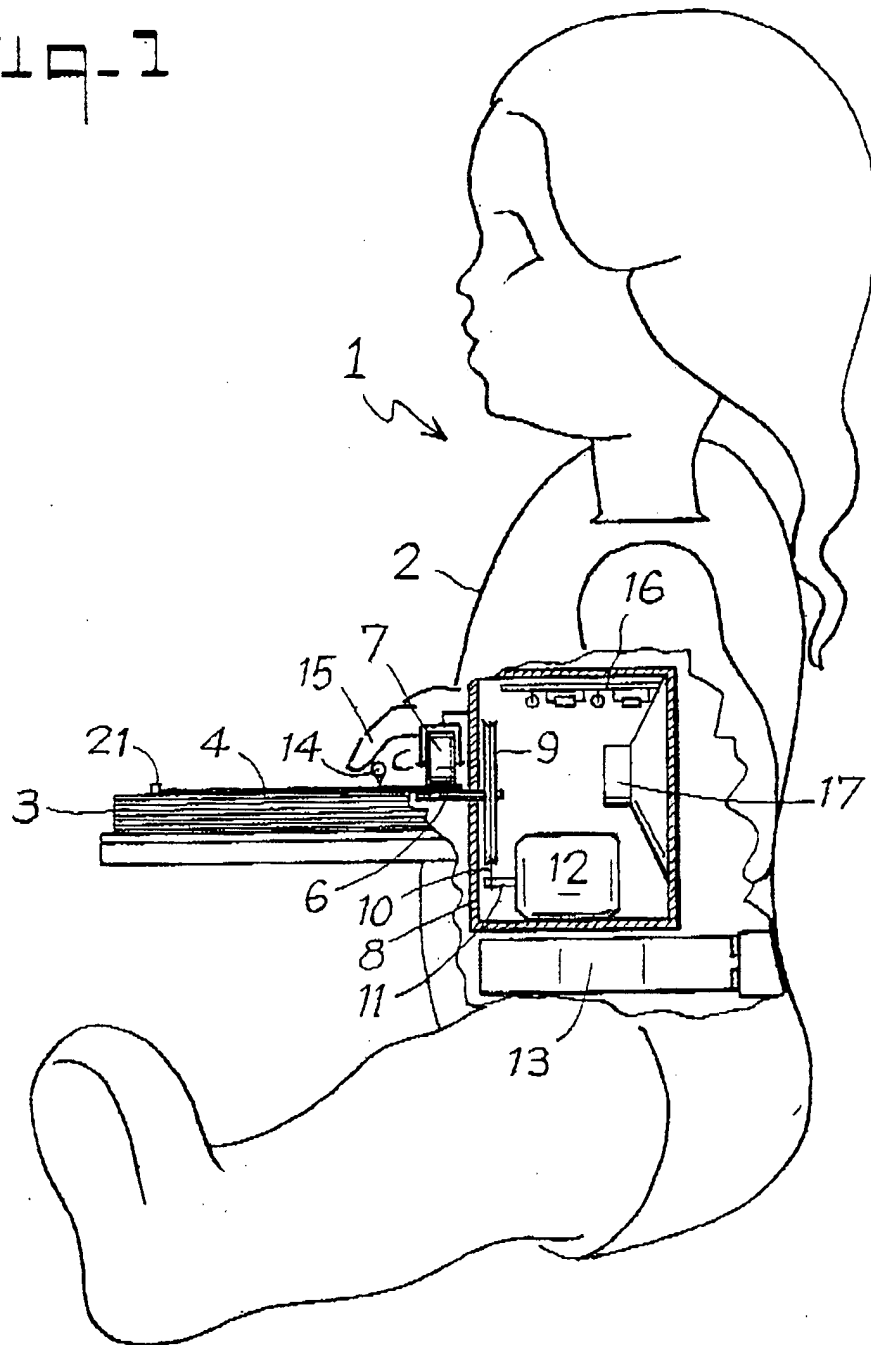
7. An educational device according to Claims 3 and 5, characterised by each card including a single recording groove, at the introductory end of which there are several auxiliary guiding grooves leading to the single groove.

8. An educational device according to any preceding claim, characterised by an electric motor inside the body of the doll, which drives a speed reducing flywheel, a shaft of which projects outside the body of the doll, is situated more or less flush with a flat reading support at the reading station, and cooperates with a pressure roller to grip and drive a card through said station.

9. An educational device according to any preceding claim, characterised by the card reading station taking the form of a book or desk placed in front of the body of the doll and by the reading head being concealed in one of the doll's hands which is placed above the reading station.

10. An educational device substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

FIG-1



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Fig-2

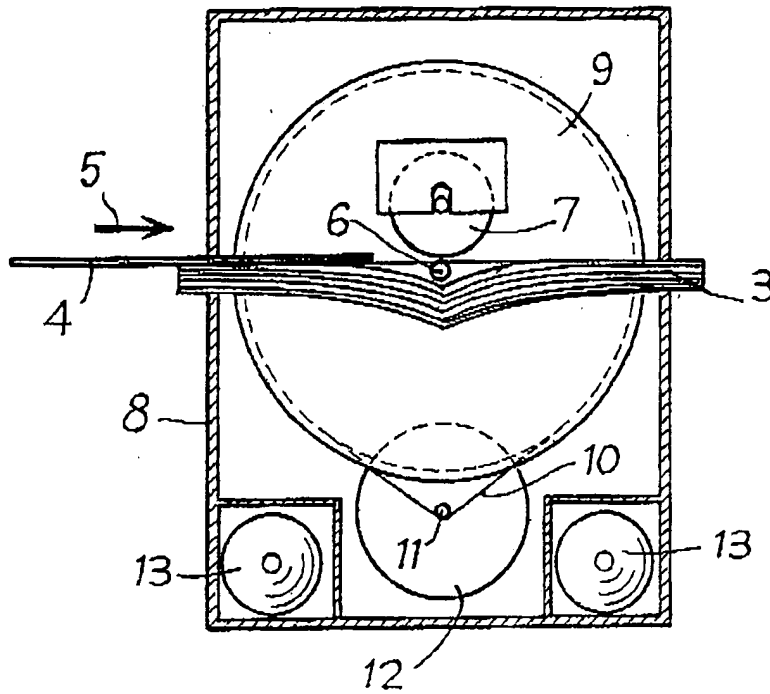


Fig-3

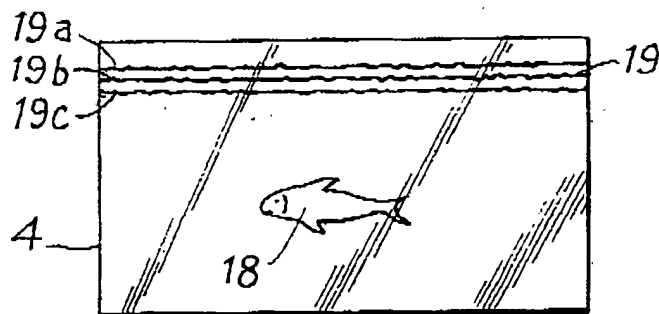
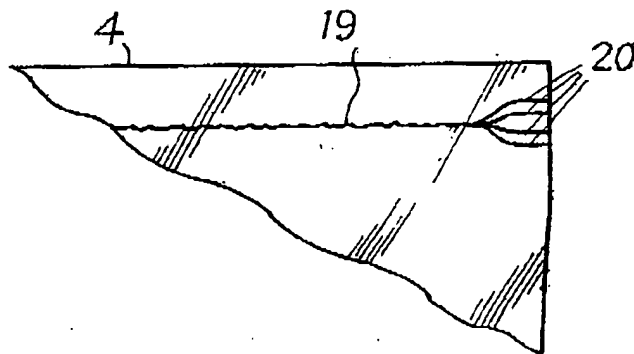


Fig-4



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## Speaking doll for the education of children

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Publication date: 1983-10-05  
Inventor(s): MIZOULE HENRI; GARDEL WILLIAM  
Applicant(s): MIZOULE HENRI; GARDEL WILLIAM  
Requested Patent: ☐ GB2117160  
Application Number: GB19830002112 19830126  
Priority Number(s): FR19820001258 19820127  
IPC Classification: G11B1/04 ; G09B17/00 ; G11B3/00  
EC Classification: A63H3/28, A63H13/15, G09B5/06B  
Equivalents: ☐ DE3302492, ☐ FR2520247, ☐ IT1151985

### Abstract

An educational device comprising a doll (1) and a set of reading cards, each card (4) containing a graphic representation and a sound recording associated with the graphic representation. The doll (1) includes a card reading station (3) which enables a card (4) to be received and to be passed in front of a reading head (14) which is concealed and is connected to a unit (16, 17) for the reading and broadcasting of the sound

recording (19), this unit (16, 17) being placed inside the body (2) of the doll (1).



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## Description

### SPECIFICATION

Speaking doll for the education of children

This invention relates to an educational device comprising a doll intended for teaching children by means of play.

Early education of children is becoming increasingly important in a more and more sophisticated world.

Toys are ideal intermediaries in education since, by means of playing, they enable basic notions to be instilled into children.

Talking dolls are known but, until now, had only a very restricted vocabulary which could not be varied beyond a limited number of preestablished recordings, usually on discs, which were introduced into the doll. The design of such systems is too rudimentary to enable any educational objective, which is in any way complex and evolutionary, to be achieved.

Furthermore, the child's interest may be caught by the audible message but this single source quickly proves to be insufficient to enable the child to assimilate properly any information other than that which is purely of an audible nature, thus limiting considerably the scope of the system.

An object of the present invention is to produce an educational unit with more varied possibilities which, in particular, enables a child to acquire more complex intellectual notions and mechanisms on the basis of a two-fold visual and audible perception. It is known that the way in which humans perceive the outside world rests basically on the use of these two senses; in other words, the field of application covered by the invention is enormous. More specifically, the purpose of the invention is to produce a doll, the units of which enable the child to believe that the doll is clever and, for example to believe that it is able to read, to count, that it is acquainted with sol-fa, or that it recognises colours or animals.

According to the present invention, there is provided an educational device comprising a doll intended for teaching children by means of play, a set of reading cards each card including, on the one hand a graphic representation and, on the other hand, a sound recording associated with the graphic representation; a card reading station which enables a reading card to be received and to be passed in front of a reading head at said reading station, and a unit connected to the reading head for the reading and broadcasting of the sound recording on said card this unit being located within the body of the doll.

Preferably, the card reading station is located outside the body of the doll.

According to one form of embodiment, each reading card includes at least one sound recording groove formed in plastics material, the reading head of the reading station being a pickup head for such a groove. The pick-up head enables the recorded tape to be read. Following the modulations in the groove, the electric signal is amplified and then applied to the terminals of a loud speaker.

Such devices may be manufactured by the makers of toy record players.

It should be noted that it is possible to produce a stronger and cheaper version of the means of broadcasting by providing a deep recording groove on a rigid plastics sheet which enables the electronic amplification circuit and the electrodynamic loud speaker to be dispensed with. This version is intended mainly for small children on account of its strong nature and since its principle allows only the recording of a short text.

According to another embodiment, each reading card includes at least one magnetic sound recording, with the reading head of the reading station being a magnetic head.

Preferably, each reading card includes at least one linear sound recording, and the reading station includes a flat support associated with means for the linear drive of the cards across the latter.

According to a further feature, there is provided an electric motor inside the body of the doll, which drives a speed reducing flywheel, a shaft of which projects outside the body of the doll, is situated more or less

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flush with a fiat reading support at the reading station, and cooperates with a pressure roller to grip and drive a card through said station.

Preferably, the card reading station takes the form of a book or a desk placed in front of the body of the doll, and the reading head is concealed in one of the doll's hands which is placed above the reading station.

In this way, a device is obtained which meets very precise objectives; on the one hand, children are attracted to the doll on account of its emotional and amusing aspects while, on the other hand, it aims via its technique to introduce the elements of education which enable the child to be stimulated to the initial bases of education.

It has been found particularly that girls identify with their dolls. If the doll can read and count, the child automatically wishes to do the same.

Consequently, all that is necessary is progressively to introduce texts which have been well chosen and illustrated so as to leave an impression on the child's memory. The doll is a little teacher, a model to be imitated. This educational device also serves as an aid for parents who wish to devote themselves to the tedious task of teaching their children to read or, in general, for those who wish to interest themselves in the education of their children.

It is important to note that, in order for the device to achieve its educational objectives fully-in other words in order to enable a real identification of the child with its doll-nothing should apparently distinguish this doll from other dolls. The mechanism is concealed inside a flexible body and there is no visible machinery to destroy the illusion. This doll is of traditional appearance and only a book, for example, resting on its knees, introduces a personal note. The book acts as a support for the passage of the recorded cards, thereby giving the illusion that the doll is sorting through texts, figures or other graphic representations shown on the card. This illusion can be strengthened if the doll points with one hand (the one containing the reading head) to the drawing which is the subject of the reading.

Other advantages and characteristics of the invention will be further understood from the following description, given by way of example only, of a preferred form of the invention, with reference to the attached drawings in which:

Fig. 1 represents a diagrammatic side view of a doll made in accordance with the invention, with part removed to show the doll's internal mechanism;

Fig. 2 represents a diagrammatic partial front view showing the units for supporting and moving a card;

Fig. 3 represents a recorded card;

and Fig. 4 represents a detail of cutting of a recorded card.

Fig. 1 shows a preferred form of embodiment of the doll 1. The doll is in a seated position and includes, at the front of the body 2, a card reading station 3 which takes the form of an open book, the upper surface of which is flat and acts as a support for a reading card 4.

The reading card 4 which is introduced laterally (arrow 5, Fig. 2) onto the support 3 is moved in a linear direction when it is captured by a drive shaft 6 and a pressure roller 7 which rests under its own weight on the shaft 6.

The shaft 6, which is buried partly in the book 3 and more or less flush with the upper flat surface of the support, passes through a casing 8 of an internal reading and sound producing mechanism which is hidden inside the body of the doll.

The internal end of the shaft 6 supports a grooved flywheel 9 which is driven by means of a belt 10 by the shaft 11 of a small electric motor 12 which is fed, via connections which are not shown, by batteries 13 which may be outside the casing 8 as in Fig. 1, or housed within the casing as in Fig. 2. An access point is provided at the back of the doll for the purpose of changing the batteries.

The reading of a sound recording which is made on a card 4 is done by means of a reading head or pick-up head 14 which, preferably is concealed under the hand 15 of the doll, which is placed above the support and which appears to be pointing out the graphic representation associated with the sound recording which is being read. The reading head 14 is connected, by means of suitable connections and through an integrated circuit 16 arranged in the case 8, to a loud speaker 17 which is also housed in the

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case 8. Naturally, the invention is not at all to be found in the production circuits which are well known in the electronics field. For example, use may be made of the circuit which is sold under reference TBA 8 20 T by Texas Instruments. The unit is powered by the batteries 1 3.

The casing 8 is very compact (for example, a parallelepipedic case 62x62x77 mm has been produced) and it is inserted easily into the foam body of the doll.

Once the doll is dressed, it appears to be holding a book or a desk in front of it on its knees.

No external mechanism is to be seen since the reading head can be hidden underneath a hand while the drive mechanism which is likewise very close to the body is also practically hidden by the arm and the doll's clothes.

The reading cards 4 may be plasticised rectangular cards. On the one hand, they contain a graphic representation 1 8 which may be a drawing, a word, a sentence, a note of music, a colour etc., and, on the other hand, a sound recording 1 9 (generally a text), corresponding, in one way or another, to the graphic representation in a given educational drawing. The child passes a card 4 into the reading station 3 and associates the sound recording with the graphic representation particularly well since the latter remains visible as it is moving and the hand 1 5 of the doll even appears to draw the child's attention to the graphic representation.

The recording 19 may be done in the form of a magnetic tape fixed to the card 4 but, for reasons of cost and durability, a recording which is made as a groove directly onto the card or onto a PVC plastic tape stuck onto the card 4 may be preferred.

A groove recording reader is then produced by means of a piezo-electric pick-up head 14, the output level of which is sufficiently high to be able to drown the interference from the motor (which is particularly troublesome with a magnetic reading head). The advantage of recordings of this type on a flexible plastic tape which is pasted onto the image card is that they are permanent and durable. This is important since the cards are handled by children. Moreover, it will be much easier to obtain duplicates.

Naturally, for reasons of simplicity, but above all, in order to enable a good sound/image association to be made, the recording and reading system is linear, thereby ensuring easy correspondence between the graphic representation and the audible reading thereof.

As shown in Fig. 3, it is possible to arrange to juxtapose several recording tracks (1 9a, 1 9b, 1 9c) on the tape or card. These tracks may present the same recording so that, in the most rudimentary systems where alignment of the card 4 at the reading station could be imperfect, the pick-up head can operate on any one of the tracks.

For systems of this kind, it is also possible to provide a single track which includes, at the introductory and auxiliary guiding tracks 20 which enable the reading head to be introduced into the track 1 9 quickly.

However, since correct alignment of the reading card at the reading station is not difficult (for example, a stop 21 on the reading support 3 can be provided if the format of the cards is standardised) it is possible to juxtapose several rectilinear tracks in order to provide different recordings which can be selected by altering the position of the reading head 14 by means of a suitable selector mechanism. As an example, neighbouring tracks may record the same text in relation to the graphic representation but spoken in several languages. The interest and multiplicity of such applications may easily be imagined.

The cards are able to handle the most diverse subjects; reading, colour study, mathematics, languages, music and, in general, all ways in which the audio-visual connection enhances learning and amusement.

The cards can contain a long or short sound recording per unit of length depending on the recording method chosen. The use of a relatively flexible plastic on a macroscopic scale makes it possible to manufacture cards of great lengths which can be rolled up for storage. It is also possible to envisage joining several rigid cards to one another by means of flexible hinges which would enable the set of cards to be folded up like a concertina.

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## Claims

### Claims

1. An educational device comprising a doll intended for teaching children by means of play, a set of reading cards, each card including, on the one hand, a graphic representation and, on the other hand, a sound recording associated with the graphic representation; a card reading station which enables a reading card to be received and to be passed in front of a reading head at said reading station and a unit connected to the reading head for the reading and broadcasting of the sound recording on said card, this unit being located within the body of the doll.
2. An educational device according to Claim 1, characterised by the card reading station being located outside the body of the doll.
3. An educational device according to Claim 1 or Claim 2, characterised by each reading card including at least one sound recording groove, the reading head of the reading station being a pickup head for such a groove.
4. An educational device according to Claim 1 or Claim 2, characterised by each reading card including at least one magnetic sound recording, the reading head of the reading station being a magnetic head.
5. An educational device according to any one of Claims 1 to 4, characterised by each reading card including at least one linear sound recording and by the reading station including a flat support associated with means for the linear drive of cards across the latter.
6. An educational device according to Claims 3 and 5, characterised by each card including several parallel recording grooves.
7. An educational device according to Claims 3 and 5, characterised by each card including a single recording groove, at the introductory end of which there are several auxiliary guiding grooves leading to the single groove.
8. An educational device according to any preceding claim, characterised by an electric motor inside the body of the doll, which drives a speed reducing flywheel, a shaft of which projects outside the body of the doll, is situated more or less flush with a flat reading support at the reading station, and cooperates with a pressure roller to grip and drive a card through said station.
9. An educational device according to any preceding claim, characterised by the card reading station taking the form of a book or desk placed in front of the body of the doll and by the reading head being concealed in one of the doll's hands which is placed above the reading station.
10. An educational device substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

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